

Listing of Claims

1. A porous, treated substrate comprising a first surface that comprises a first amount of a surfactant or mixture of surfactants and a second surface that comprises a second amount of the surfactant or the mixture of surfactants wherein the second amount of the surfactant or the mixture of surfactants on the second surface is less than the first amount of the surfactant or the mixture of surfactants on the first surface.
2. The porous, treated substrate of Claim 1 wherein the porous, treated substrate is a single layer.
3. The porous, treated substrate of Claim 1 wherein the porous, treated substrate is a thermoplastic porous, treated substrate and the thermoplastic is selected from the group consisting of polyolefins, polymers and copolymers of ethylene, polymers and copolymers of propylene and combinations thereof.
4. The porous, treated substrate of Claim 1 wherein the porous, treated substrate is a film, a nonwoven fabric or a foam.
5. The porous, treated substrate of Claim 1 wherein the porous, treated substrate is a single layer of film, a single layer of nonwoven fabric or a single layer of foam.
6. The porous, treated substrate of Claim 1 wherein the porous substrate is a single layer of spunbond nonwoven fabric that has a basis weight ranging from about 10 grams per square meter to about 50 grams per square meter.
7. The porous, treated substrate of Claim 1 wherein the surfactant or the mixture of surfactants is selected from the group consisting of ethoxylated, hydrogenated castor oil; sorbitan monooleate; ethoxylated polyalkyl siloxanes; an alkyl polyglycosides, derivatives of an alkyl polyglycosides and mixtures thereof.
8. The porous, treated substrate of Claim 1 wherein surfactant or the mixture of surfactants comprises an ethoxylated, hydrogenated castor oil; sorbitan monooleate; and an alkyl polyglycoside or a derivative of an alkyl polyglycosides

9. The porous, treated substrate of Claim 1 wherein the first surface comprises at least about 0.18 weight percent of the surfactant or the mixture of surfactants and the second surface comprises less than about 0.15 weight percent of the surfactant or the mixture of surfactants.
10. The porous, treated substrate of Claim 1 wherein the first surface comprises at least about 0.5 weight percent of the surfactant or the mixture of surfactants and the second surface comprises less than about 0.01 weight percent of the surfactant or the mixture of surfactants.
11. The porous, treated substrate of Claim 1 wherein the second surface comprises essentially no surfactant.
12. The porous, treated substrate of Claim 1 wherein the second surface comprises no surfactant.
13. A personal care absorbent article comprising a liner that comprises the porous, treated substrate of Claim 1.
14. A diaper comprising a liner that comprises the porous, treated substrate of Claim 1.
15. A method of treating a porous substrate, the method comprising:
 - a. providing a porous substrate, the porous substrate having a first surface and a second surface; and
 - b. contacting a surfactant or a mixture of surfactants to the first surface of the porous substrate such that a lesser amount of the surfactant or mixture of surfactants contacts the second surface than contacts the first surface.
16. The method of Claim 15, wherein the method results in less surfactant adhering to the second surface relative to the first surface.
17. The method of Claim 15, wherein the step of contacting a surfactant or a mixture of surfactants to the first surface of the porous substrate comprises contacting a foam that comprises the surfactant or mixture of surfactants to the first surface.

18. The method of Claim 15, wherein the step of contacting a surfactant or a mixture of surfactants to the first surface of the porous substrate comprises contacting a foam that comprises air and a liquid comprising the surfactant or mixture of surfactants to the first surface, wherein the ratio of the air volume to the liquid volume of the foam is not greater than about 30 to 1.
19. The method of Claim 15, wherein the step of contacting a surfactant or a mixture of surfactants to the first surface of the porous substrate comprises contacting an aqueous solution, dispersion or emulsion that comprises greater than about 10 weight percent of the surfactant or mixture of surfactants.
20. The method of Claim 15, wherein the step of contacting a surfactant or a mixture of surfactants to the first surface of the porous substrate comprises contacting the porous substrate with an aqueous solution, dispersion or emulsion at a rate of less than about 0.5 weight percent of the aqueous solution, dispersion or emulsion comprising the surfactant or mixture of surfactants relative to the weight of the porous substrate.
21. The method of Claim 15, wherein the step of contacting a surfactant or a mixture of surfactants to the first surface of the porous substrate comprises contacting an aqueous solution, dispersion or emulsion of the surfactant or mixture of surfactants wherein the aqueous solution, dispersion or emulsion of the surfactant or mixture of surfactants comprises not less about 15 weight percent of the surfactant or a mixture of surfactants.
22. The method of Claim 15, further comprising providing the porous substrate in a first direction, bending the porous substrate in a second direction around an apparatus to define a wrap angle of from about 90° to 180° and contacting the surfactant or mixture of surfactants to the first surface of the porous substrate at about the point the porous substrate bends around the apparatus.
23. The method of Claim 15, further comprising providing the porous substrate in a first direction, bending the porous substrate in a second direction around an apparatus to define a wrap angle of from about 120° to 180° and contacting the surfactant or mixture of surfactants to the first surface of the porous substrate at about the point the porous substrate bends around the apparatus.

24. The method of Claim 15, further comprising providing the porous substrate in a first direction, bending the porous substrate in a second direction around an apparatus to define a wrap angle of from about 150° to about 170° and contacting the surfactant or mixture of surfactants to the first surface of the porous substrate at about the point the porous substrate bends around the apparatus.
25. The method of Claim 14, further comprising drying the porous, treated substrate by directing a gas at the substrate in a direction that is generally from the second surface toward the first surface.
26. The method of Claim 14 further comprising drying the porous, treated substrate by directing heated air at the porous treated substrate in a direction that is generally from the second surface toward the first surface.